

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,970,415 B1
 APPLICATION NO. : 09/710718
 DATED : November 29, 2005
 INVENTOR(S) : Cecilia Gabriela Galarzaz et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 7, Equation (4) reads “ $y_{pam}(n) = y_{pam}(t)|_{t=nT_s} = \sum_j y_j(n)$ ” and should read

-- $y_{pam}(n) = y_{pam}(t)|_{t=nT_s} = \sum_j y_j(n)$ --.

Column 7, Equation (6) reads “ $v(n) = v(t)|_{t=nT_s}$,” and should read

-- $v(n) = v(t)|_{t=nT_s}$ --.

Column 10, line 64 reads “...[-W, +WM]. It is clear that this frequency range corresponds...” and should read -- ...[-W, +W]. It is clear that this frequency range corresponds... --.

Column 11, lines 10-11 read “...assume that for each disturber type the standard specifies f_i possible nominal frequencies then the set F defined as...” and should read -- ...assume that for each disturber type the standard specifies n_i possible nominal frequencies then the set F defined as... --.

Column 12, Equation (15) reads

$$y_j^{nw}(n) = \frac{1}{N} \sum_{l=0}^{N-1} y_{\text{data}}(n + l \cdot Nf_j) \quad n = 0, \dots, Nf_j$$

$$n=0, \dots, Nf_j$$

and should read -- $y_j^{nw}(n) = \frac{1}{N} \sum_{l=0}^{N-1} y_{\text{data}}(n + l \cdot Nf_j) \quad n = 0, \dots, Nf_j$ --.

Column 13, Equation (19) reads, “ $y_{id}(n) = s_f^T(n) * h_f(n)$ ” and should

read -- $y_{id}(n) = s_f^T(n) * h_f(n)$ --.

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Column 13, Equation (19) reads,

$$y_{idj}(n) = s_j'(n) * h_j(n) + \sum_m s_m(n) * h_m(n)$$

$$w_j(n) = y_{idj}(n) + v(n)$$

$$w_j(n) = y_{idj}(n) + v(n)$$

and should read: -- $y_{idj}(n) = s_j'(n) * h_j(n) + \sum_m s_m(n) * h_m(n)$ --.

$$w_j(n) = y_{idj}(n) + v(n)$$

Column 13, line 41 reads, "...contribution of the sequence of known symbols $s_s^j(0)$..." and should read -- ...contribution of the sequence of known symbols $s_j^s(0)$... --.

Column 14, line 3 reads, "...order of the models in Π cannot be chosen arbitrarily large." and should read -- ...order of the models in Π cannot be chosen arbitrarily large. --.

Column 15, line 1 reads, "In general, using a 21 order interpolation, $h(nT_s - IT)$ has the..." and should read -- In general, using a 21 order interpolation, $h(nT_s - IT)$ has the... --.

Column 15, line 14 reads, "...where $\Delta T = T_s - T$. Notice that in Equation (22), $s(k)$ is a..." and should read -- ...where $\Delta T = T_s - T$. Notice that in Equation (22), $s(k)$ is a... --.

Column 16, line 15 reads, "...the contribution of the random data in a single term $1E$, we..." and should read -- ...the contribution of the random data in a single term ϵ , we... --.

Column 16, Equation (31), lines 36-39 read, " $y(k) - a_1 y(k-1) - \dots - a_m y(k-m) = b_0 s(k) + b_1$ " and should read -- $y(k) - a_1 y(k-1) - \dots - a_m y(k-m) = b_0 s(k) + b_1 s(k-1) + \dots + b_m s(k-m)$ --.

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Column 17, line 32 reads, "...tions, it maybe necessary to compute the noise model when..." and should read -- ...tions, it may be necessary to compute the noise model when... --.

Column 19, line 15 reads, " $\Phi(t) = \Phi_0 + \delta(t) + \phi(t)$ " and should read -- $\Phi(t) = \Phi_0 + \delta(t) + \varphi(t)$ --.

Column 19, line 17 reads, "...where Φ_0 represents the initial phase offset, $\delta(t)$ is related to..." and should read -- ...where Φ_0 represents the initial phase offset, $\delta(t)$ is related to... --.

Column 19, line 18 reads, "...frequency deviation and drift, and $\phi(t)$ corresponds to the..." and should read -- ...frequency deviation and drift, and $\varphi(t)$ corresponds to the... --.

Column 19, lines 22-23 read, "...the order of 60 ppm (parts-per-million). Variations caused $\delta(t)$ and $\phi(t)$ pose a serious problem to several applications..." and should read -- ...the order of 60 ppm (parts-per-million). Variations caused by $\delta(t)$ and $\varphi(t)$ pose a serious problem to several applications... --.

Column 19, line 58 reads, "...estimated channel h ;" and should read -- ...estimated channel \hat{h} ; --.

Column 20, line 20 reads, "...091710.579 titled "Method and Apparatus for Mitigation of..." and should read -- ...09/710,579 titled "Method and Apparatus for Mitigation of... --.

Column 23, Claim 36, line 1 reads, "The method according to claim 29, wherein the..." and should read -- The method according to claim 19, wherein the... --.

Column 23, Claim 37, line 3 reads, "The method according to claim 29, wherein the..." and should read -- The method according to claim 19, wherein the... --.

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Claim No. 41 was omitted in the issued patent, however according to the Supplemental Notice of Allowance dated June 9, 2005, claim 59 should be included and that the claims are numbers 1-41. Applicant requests the following be added:

Column 24, Claim 41, add:

-- 41. An article of manufacture comprising a program storage medium readable by a computer and tangibly embodying at least one program of instruction executable by said computer to perform a method of characterization of an interference source of a communication signal in a communication system, the method comprising:

estimating the interference signal transmission rate comprising:

dividing the bandwidth of the communication signal in a plurality of frequency regions;

selecting a plurality of frequency regions by performing a frequency zoom in analysis of the communication signal; and
detecting harmonic components of the communication signal for each of the plurality of frequency regions;

performing a service type identification; and

estimating a channel impulse response of the interference signal. --

Signed and Sealed this

Seventeenth Day of October, 2006



JON W. DUDAS

Director of the United States Patent and Trademark Office